

J. MARION SIMS AND THE VESICO-VAGINAL FISTULA: THEN AND NOW *

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PART I: HISTORICAL SKETCH

Ninety-five years ago in the town of Montgomery, Alabama, there stood a tiny hospital that must be reckoned one of the most remarkable hospitals of all time. It housed seven women, all negro slaves; all of them suffered from uncontrollable dribbling of urine, for all had a destruction of the wall separating bladder from vagina—one of the fearful consequences of hard childbirth. The hut—for it was little more—had been built by an obscure country doctor, J. Marion Sims; and he maintained it for the single purpose of proving his belief that the vesico-vaginal fistula, previously regarded as incurable, could be remedied by simple surgical means, the success of which had hitherto been thwarted merely because of mechanical difficulties peculiar to such work. Sims believed that he could overcome these difficulties, and he laboured for four years.

It was in the cotton-growing area of the Southern States that Sims worked, amid the plantations and slaves; all labour was supplied by the great coloured population. Whatever one's views may be on the lot of the negroes as slaves—and there are many who hold that the word was misapplied—there is no doubt that the mothers among them suffered untold hardships in childbirth; for rickety deformities and contractions abounded, and the women preferred to suffer in seclusion than to call for help at such time. So it came that greatly prolonged labour was common, and, even if not fatal, it led all too often to partial destruction of the pelvic organs, so that the woman was brought to a state of wretchedness hardly to be borne. Marion Sims was guided by a simple philosophy, and it was his firm belief that no happening in this world, even the most trivial, is without its meaning and purpose. Never was this more clearly proved than in his greatest work of curing the vesico-vaginal fistula.

Sims's First Cases

At the time when Sims began to take a real interest in

* Address given to the Oxford University Medical Society on October 29, 1940.

his profession—for his early record was undistinguished, and more than once he sought to give up the practice of medicine—he had to examine, within a few days of each other, two negro women suffering from urinary incontinence. In both cases Sims diagnosed a vesico-vaginal fistula, and, in keeping with the opinion of the time, he reported to the owners of the women that cure was wholly impossible. Meanwhile he had been careful to consult every medical book within reach, and in none of them could he find any helpful advice. Soon afterwards he was requested to see yet another coloured woman with similar symptoms, but, believing that the consultation was useless, he firmly refused to comply. Ignoring his refusal, the owner sent the woman by train to town, and Sims was thus obliged to make examination against his will. Again as a matter of course he decided that nothing could be done, but as the girl came from a distance shelter was given for the night.



FIG. 1.—J. Marion Sims.

dislocation of the uterus. Sims resolved to examine the pelvis and replace the organ. Hitherto he had always avoided such examination: he had little knowledge of the disorders peculiar to women, and he disliked the subject. Now, however, he had to act; but how to do it? At this moment a long-forgotten remark by a teacher at the Charleston Medical College came back to him, and he proceeded to place the patient in the knee-chest position. What happened next can best be described in his own words:

"So I placed the patient as directed, with a large sheet thrown over her. . . . I introduced the middle and index fingers, and immediately touched the uterus. . . . I turned my hand with the palm upward, and then downward, and

pushing with all my might, when all at once I could not feel the womb, or walls of the vagina. I could touch nothing at all, and wondered what it all meant. It was as if I had put my two fingers into a hat, and worked them around, without touching the substance of it."

Sims then goes on to explain how the patient's position had created a suction in the pelvis and how the air under atmospheric pressure had rushed in and ballooned the vagina to its fullest capacity.

"Then, said I to myself, if I can place the patient in that position, and distend the vagina by the pressure of air, so as to produce such a wonderful result as this, why can I not take the incurable case of vesico-vaginal fistula, which seems now to be so incomprehensible, and put the girl in this position and see exactly what are the relations of the surrounding tissues? Fired with this idea, I forgot that I had twenty patients waiting to see me all over the hills of this beautiful city. I jumped into my buggy and drove hurriedly home. Passing by the store of Hall, Mores and Roberts, I stopped and bought a pewter spoon. I went to my office, where I had two medical students, and said, 'Come, boys, go to the hospital with me.' 'You have got through your work early this morning,' they said. 'I have done none of it,' I replied: 'come to the hospital with me.' Arriving there, I said, 'Betsey,† I told you that I would send you home this afternoon, but before you go I want to make one more examination of your case.' She willingly consented. . . . Introducing the bent handle of the spoon I saw everything, as no man had ever seen before. The fistula was as plain as the nose on a man's face. The edges were clear and well-defined, and distinct, and the opening could be measured as accurately as if it had been cut out of a piece of plain paper. The walls of the vagina could be seen closing in every direction; the neck of the uterus was distinct and well-defined, and even the secretions from the neck could be seen as a tear glistening in the eye, clear even and distinct, and as plain as could be. I said at once, 'Why can not these things be cured? It seems to me that there is nothing to do but to pare the edges of the fistula and bring it together nicely, introduce a catheter into the neck of the bladder and drain the urine off continually, and the case will be cured.' Fired with enthusiasm by this wonderful discovery, it raised me into a plane of thought that unfitted me almost for the duties of the day. Still, with gladdened heart, and buoyant spirits, and rejoicing in my soul, I went off to make my daily rounds. I felt sure that I was on the eve of one of the greatest discoveries of the day. The more I thought of it the more I was convinced of it."

Early Failures

Sims made feverish preparations. New instruments were required, and the blacksmith, the dentist, and the jeweller were all laid under contribution. He writes:

"I did not send Lucy home, and I wrote to her master that I would retain her there, and he must come and see me again. I saw Mr. Westcott, and I told him that I was on the eve of a great discovery, and that I would like to have him send Anarcha back to my hospital. I also wrote to Dr. Harris, saying that I had changed my mind with regard to Betsey, and for him to send her back again. I ransacked the country for cases, told the doctors what had happened and what I had done, and it ended in my finding six or seven cases of vesico-vaginal fistula that had been hidden away for years in the country because they had been pronounced incurable. . . . Then I made this proposition to the owners of the negroes: 'If you will give me Anarcha and Betsey for experiment, I agree to perform no experiment or operation on either of them to endanger their lives, and will not charge a cent for keeping them, but you must pay their taxes and clothe them. I will keep them at my own expense.' Remember, I was very enthusiastic, and expected to cure them, every one, in six months. I never dreamed of failure, and could see how accurately and how nicely the operation could be performed."

† Sims makes a slip in the name; this woman was Lucy.

The great day came and the doctors assembled. Lucy was chosen. The operation started, and after an hour's work the opening in the bladder was closed to everyone's satisfaction. But Lucy became very ill; the fistula reopened, although to a less extent than before, and it was two months before the patient recovered her strength. Nothing daunted, Sims continued his work. Operation after operation was performed; methods were improved, skill and dexterity were developed; but no fistula was cured. One by one his helpers deserted him, until at last he was alone, and denounced as an unscrupulous charlatan. In desperation he trained his patients to assist at the operation on each other. Of this period he later wrote:

"My repeated failures brought about a degree of anguish that I cannot now depict even if it were desirable. All my spare time was given to developing a single idea, the seemingly visionary one of curing this sad affliction which not infrequently follows the law pronounced by an offended God when He said of woman: 'In sorrow and suffering shalt thou bring forth children.'"

But Sims's determination did not waver, and again he says:

"Nor was I alone in another sense, for I had succeeded in passing my own energy and enthusiasm into the hearts of the half-dozen sufferers who looked to me for help, and implored me to repeat operations so tedious, and at the same time so painful, that none but a woman could have borne them."

Thus four years passed. Sims's practice suffered. Money troubles appeared, and his health, undermined by constant work, now began to cause anxiety. But his skill had grown enormously. He had improved his tools. A self-retaining malleable tin catheter had been devised. The knee-chest position had been modified to a more tolerable semi-prone position. The original suture apparatus had also been discarded and a simpler device adopted which eliminated the need for clumsy vaginal rods and tubes. Of this last improvement he writes:

"Then I said, 'I am not going to perform another operation until I discover some method of tying the suture higher up in the body where I can not reach.' This puzzled me sorely. I had been three weeks without performing a single operation on either of the half-dozen patients that I had there. They were clamorous, and at last the idea occurred to me about three o'clock one morning. I had been lying awake for an hour, wondering how to tie the suture, when all at once an idea occurred to me to run a shot, a perforated shot, on the suture, and, when it was drawn tight, to compress it with a pair of forceps, which would make the knot perfectly secure. I was so elated with the idea, and so enthusiastic as I lay in bed, that I could not help waking up my kind and sympathetic wife and telling her of the simple and beautiful method I had discovered of tying the suture. I lay there till morning, tying the suture and performing all sorts of beautiful operations, in imagination, on the poor people in my little hospital; and I determined, as soon as I had made my round of morning calls, to operate with this perfected suture."

The Operation Succeeds

Still success eluded him. Sims then began to suspect that the constant tumefaction, the inflammation, and the cystitis which followed his operations might be due to the use of silk as a suture material.

"Just in this time of tribulation about the subject, I was walking from my house to the office, and picked up a little bit of brass wire in the yard. It was very fine, and such as was formerly used as springs in suspenders before the days of India-rubber. I took it round to Mr. Swan, who was then my jeweller, and asked him if he could make me a little silver wire about the size of the piece of brass wire.

He said Yes, and he made it. He made it of all pure silver. Anarcha was the subject of this experiment. . . . This was the thirtieth operation performed on Anarcha. . . . When the week rolled around—it seemed to me that the time would never come for the removal of the sutures—Anarcha was removed from the bed and carried to the operation-table.



FIG. 2.—Sims operating on a vesico-vaginal fistula. The patient is in the semi-prone position, and the correct use of his retractor is clearly shown. The originals of this picture and of Fig. 3 C were prepared under Sims's supervision for Savage's *Female Pelvic Organs*.

With a palpitating heart and an anxious mind I turned her on her side, introduced the speculum, and there lay the suture apparatus just exactly as I had placed it. There was no inflammation, there was no tumefaction, nothing unnatural, and a very perfect union of the little fistula."

The date was June 21, 1849, and Sims was then 36 years of age.

From that moment Sims's success in the treatment of fistula was amazing. All the subjects of his experiments were cured in a few weeks, and as patient after patient was restored to health his fame spread.† But new troubles now appeared. First there was a death in his family; then his own health gave way and he became the victim of a chronic form of dysentery endemic at that time in the Southern States. He became emaciated, was quite unfitted for work, and on many occasions believed that death was at hand. It was at this time—1851—that he decided to publish details of his method of curing vesico-vaginal fistula that others might continue where he had been forced to leave off. This paper is remarkable for the force and directness of the writing, and for the confidence shown on every page. It is a truly remark-

† It is, however, incorrect to suppose that Sims was the first person ever to cure a vesico-vaginal fistula. This had occasionally been done before, but such success as had been achieved was due more to a combination of favourable circumstances than to the development and systematic application of sound methods. It is improbable that Sims had any knowledge of previous success when he engaged in this work. Gossett of London deserves special mention. In a letter to the *Lancet* in 1834 he described the closure of a vesico-vaginal fistula by methods nearly identical with those that Sims was to use fifteen years later. In particular, he advocated the use of gilt silver wire, saying: "It excites but little irritation and does not appear to induce ulceration with the same rapidity as silk or any other material of which I am acquainted." Despite his success Gossett's teaching did not endure.

able document to have been produced by a supposedly dying man.

Work at the New Fistula Hospital

But Sims did not die. For four years he went from place to place in search of health—and, be it added, in search of a means of livelihood. At last he settled in New York. Gradually his weakness left him and he was able again to turn attention to professional affairs. But the New York medical men would have none of him. They picked his brains, they even borrowed his instruments, but they gave him no work. At last, miserable and penniless, he made contact with an influential newspaper reporter. Clearly, if Sims could not get access to patients, patients must be given access to him. A public meeting was arranged, and Sims made an earnest plea for the establishment of a new hospital to be devoted to treatment of the vesico-vaginal fistula and like injuries. Generous support was forthcoming from certain ladies of New York society, and after many struggles and much opposition the hospital was brought into existence. There was never any doubt of its success, and patients crowded in from all parts of the country.

As if in happy augury, the first work in the new hospital was the most remarkable yet undertaken. The patient was Mary Smith, a recently arrived immigrant from Western Ireland,§ "a pitiable, ill-smelling, repulsive creature with extensively excoriated vulva, the result of constant escape of urine." An encrusted mass was discovered in the vagina, in size not less than a closed fist; it was thought to be a huge calculus. After great effort, and at the expense of much suffering to the patient, the object

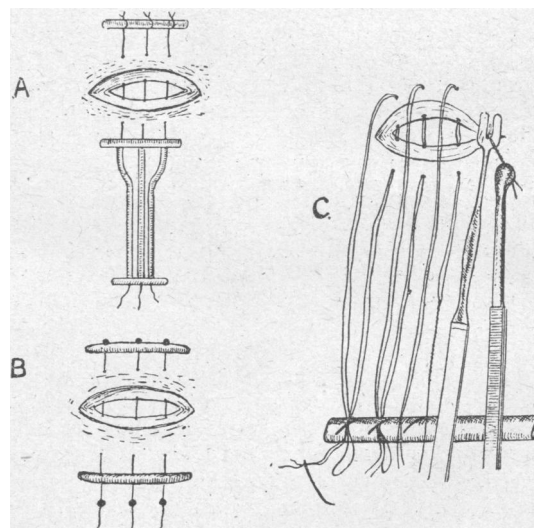


FIG. 3.—Sims's first, second, and third methods, redrawn from his original illustrations. Diagram C shows the use of pilot silk sutures to pull through the silver wires. The cleft spatula and wire-twister are also shown.

was dislodged: it was then found to be a wooden float such as is used for a fish-net. Her doctor had used this bobbin to plug the fistula in an attempt to stop the flow of urine, and at the same time to prevent the fundus of the bladder prolapsing into the vagina. Most of the base of the bladder and part of the urethra were destroyed, yet after many operations these organs were reconstructed and bladder function partly restored. Mary Smith became an assistant in the hospital and worked there for years.

A new name now enters the story. An old acquaintance of early days had recently married a Dr. Thomas

§ Records of this hospital show that 58% of the patients admitted with vesico-vaginal fistula came from different almshouses of Great Britain and from the Continent.

Addis Emmet; Sims at once took a liking to the young man and engaged him as assistant in the new hospital. No better choice could have been made, for Emmet in his time came to equal, and even excel, his master in skill and judgment. Some of Sims's later methods are believed to have been adopted through Emmet's influence, and Emmet was responsible for giving to the world the most comprehensive and valuable account of fistula work based on Sims's technique that has yet been written.

With Emmet's help more and more work was undertaken, and soon the hospital became inadequate. New ground had to be secured; and that, indeed, must have caused anxious thought, for the site finally chosen was the burial place of victims of a cholera epidemic twenty-five years before, and no fewer than 27,000 corpses had to be removed before building could be started. A new and much larger hospital at length appeared; a Charter was secured, and "The Women's Hospital in the State of New York" came into being. In more recent years there was again a change of site, and the Waldorf Astoria Hotel now stands on the old ground. The importance of this hospital goes far beyond the fact that it was founded by the genius, courage, and pertinacity of Marion Sims; it was indeed the first hospital, in the modern sense of the word, to be devoted to the treatment of diseases of women, and it thus marks the origin and recognition of gynaecology as a medical specialty in its own right.

Later Activities

Sims's later activities are full of interest, but they are of less concern with regard to fistula work. During the Civil War he left America for Europe, and here he met Simpson, Syme, and a host of other surgeons of the time. Of Syme he wrote: "I have seen, all over the world, great surgeons operate, in my own country, in London, and in Paris; but I have never seen such an operator." He records an experience with the recently introduced chloroform anaesthesia. While operating before a group of eminent French surgeons his patient, a French countess, suddenly stopped breathing and appeared to be dead. Among those present was Nélaton, who at once took command of the situation and directed that the patient should be hung head downwards by her legs. After some twenty minutes of artificial respiration in this position the Countess recovered. It is said that Nélaton was prompted to this action because of a discovery made by his son: a number of mice had been chloroformed, and some had been hung by their tails; these animals were later found to be twisting about in full vigour. The episode made a great impression on Sims; he described chloroform as "delicious and dangerous," and he never again used it in his fistula work. It appears that only once did he operate in London: on that occasion, at the Samaritan Hospital, he closed a large fistula to the satisfaction of the on-lookers, but one week later the patient was dead. Examination showed that he had included the ureters in his sutures. This was the first time Sims had ever lost a patient by his operation.

In 1866 Sims's only book, *Clinical Notes on Uterine Surgery*, was published in London. This work made a deep impression on medical thought of the time, and it marked a turning-point in the development of gynaecology, which now became a surgical rather than a medical subject. Even at the present day matters of great interest are found in its pages; for example, the "fertile period" and its relation to the menstrual cycle is accurately described—half a century before its meaning was appreciated. The first successful artificial insemination for the treatment of sterility was by Sims. He, too, first recorded a cholecystotomy and gave the operation its name. Yet again, he was the first to advocate free exploration of the

abdomen after gunshot wounds, and it was the disregard of his advice on this matter that deprived President Garfield of his only hope of life after the attempted assassination.

At a later date, during the Franco-Prussian War, Sims commanded an Anglo-American Ambulance Corps—must these things ever be!—and at the field of Sedan controlled a hospital of 400 beds. European honours were showered on him. He went from success to success. He attended some of the most distinguished people of the time, including the Empress Eugénie herself; the instruments used on that occasion are to be seen in the present Women's Hospital of New York. In 1881, when in England, he all but succumbed to pneumonia, but was nursed back to health by the "great kindness and skill" of Dr. Ord of St. Thomas's Hospital. Two years later he died suddenly at his home while still in the midst of full professional activities.

The obituary notice in the *British Medical Journal* of November 17, 1883, reads as follows:

"On November 13 last there died at New York a man who bears a name that will ever be identified with gynaecology; indeed, Dr. J. Marion Sims must be considered as the establisher of that branch of medical science which before his day had been looked upon as a mere accessory to obstetrics."

A contemporary, Dr. Mundé, describes Sims thus:

"Personally, Dr. Sims was one of the most amiable and lovable of men. A genial, hearty manner, so common to the sons of the 'Sunny South,' a certain sympathetic charm of voice and action, which few could resist, and a frankness and kindness, especially pleasing to the young men who called to ask his counsel; a warm-hearted, impulsive nature, easy to arouse to anger, and ready to melt in tears; forgiving, gentle, playful, even, at times; modest and unassuming; in fact, a nature of which even the faults seemed lovable—these were the characteristics of J. Marion Sims."

PART II: PERSONAL OBSERVATIONS

My own interest in the vesico-vaginal fistula was early aroused by contact with enthusiastic workers—the late Prof. Toth of Budapest, and particularly Dr. Hunner of Baltimore, who, with Prof. Cullen, has imparted something of the Sims tradition to the gynaecological clinic of the Johns Hopkins Hospital. Later experience has kindled this interest, and brief notes on a few unusual or difficult cases may not now be out of place. But first, what is the modern attitude to Sims's operation?

Modern Attitude to Sims's Operation

The vesico-vaginal fistula is becoming increasingly rare, and in this country, at least, has come to be regarded almost as a surgical curiosity. But this happy result of improved obstetrics has also had the less favourable effect of greatly lessening the experience of individual workers, and a sadly diminished interest in the subject is reflected in modern books of treatment. Further, the introduction of the operation of vesical exclusion has tempted many surgeons to resort almost at once to a transplantation of ureters into colon when faced with difficulty in effecting repair of a urinary fistula by direct methods. There may be very rare occasions when no other choice is open, but there is little doubt that an adequate trial of vaginal methods is often shirked because of an over-dread of the apparent difficulties which Sims in his time did so much to overcome. Similar remarks can be made regarding the modern operation of transabdominal approach to the fistula. Naguib Pacha Mahfouz, who has recently described his experiences in the treatment of 400 cases of urinary fistula—some of them of the most amazing nature

—has never in recent years resorted to the latter operation, and has but little use for the first.

Sims's original operation, consisting essentially of "edge-paring," has also been criticized, and modern workers usually employ a flap-dissection of vaginal wall from bladder as first described by Colles of Dublin (a name better known perhaps in fracture work than in gynaecology). Development of this operation has led many to suppose that Sims's technique is outdated. In this I do not agree. I have used the flap operation with complete success on a number of occasions, but I also believe that there are times when adequate flap-splitting is impossible and when the older and simpler methods of Sims are indeed the only ones which can be employed. In this particular field the skill—almost legerdemain—of Sims and Emmet may be gone, but advantages of which they knew little—such as antisepsis, reliable anaesthesia, and improved lighting devices—make good our loss. Sims's position, Sims's speculum, Sims's method of edge-paring, and Sims's silver wire could achieve the seemingly impossible a century ago, and they can do so now. At this point it is fitting to mention the name of Herbert Spencer, who has been one of the foremost exponents of Sims's methods in this country. With a specially devised tubular needle for placing the silver wire sutures, Spencer repeatedly succeeded in effecting a cure even in patients who had been subjected to previous operations by other methods.

Some Unusual Cases

One of my cases strikingly illustrates the value of Sims's methods.

A patient had a fistula which was situated high in the vagina where retraction of scar tissue had so altered the normal anatomy that the cervix uteri had been drawn up far behind the symphysis pubis. Under anaesthesia, inspection was made with the woman in the lithotomy position: it was impossible to see even the position of the fistula. The patient was then placed in Sims's semi-prone position and Sims's speculum introduced. Exposure was still supremely difficult, but a bougie passed into the bladder and used as a lever enabled fleeting glimpses to be obtained of a large opening almost completely hidden behind bulging and oedematous bladder mucosa. The relationship of the parts, at first puzzling, was suddenly made plain by the discovery that the anterior lip of the cervix had sloughed away, and that the remainder of the cervix had so rotated forwards that it projected into the bladder cavity and acted as a partial plug to a large fistulous opening. An hour's sustained effort served only to demonstrate the peculiar relation of cervix to bladder; operation seemed impossible. Resort was then made to Sims's original knee-chest position. Improved exposure resulted, and it was now possible, although in painfully slow and distressingly imperfect fashion, to pare the scarred and retracted edges of the fistula. Silver wires were laid by Sims's method and the opening closed. No more was hoped for from this procedure than that a part of the fistula might remain closed, enabling a later operation to be undertaken with greater ease and certainty of success; yet, to my delight, the entire fistula remained closed and urinary incontinence was completely cured by this one operation. No complicated procedure could have done more than this: nor can I suppose, even by extravagant imagination, that flap-splitting was possible in such peculiar and difficult circumstances.

The size of the fistula is no indication of the difficulty of treatment. This is illustrated in the following case.

A patient had a difficult labour necessitating the use of crushing instruments; the uterus had ruptured and a subtotal hysterectomy had been performed. Leakage of urine had continued for months without change. Inspection of the vagina with the patient in the lithotomy position revealed a huge, red, velvet-like mass filling the vagina: this was found to be the anterior wall of the bladder prolapsed through a rent in the vesico-vaginal septum, so that the entire organ was virtually inverted into the vagina. The edges of the gap were completely obscured by the bulging tumour, but placing the patient

in Sims's position restored normal relations: the tear was then found to extend from high in the damaged cervix, through the whole of the floor of the bladder, to end in the upper part of the urethra. As some anxiety was felt lest the ureters might be injured by the proposed operation, a cystoscope was passed. By pinching together the labia it was possible to distend both the bladder and the vagina with fluid. The positions of the ureteric openings were then easily defined, and catheters were passed: these proved to be of considerable help in preventing a dangerous positioning of the sutures. An operation of the flap-splitting type was performed and immediate and complete union resulted. It must be added that some six months later, following an attack of severe bronchitis, a slight urinary leak was traced to a minute opening in the lower portion of the wound: this opening was easily and permanently closed by a second operation.

Two other cases were remarkable because of the mental depression of the patients.

In one, a destruction of tissue over the upper part of the urethra had been caused by an obstetric injury: the condition had been aggravated by previous unsuccessful efforts at operative treatment made elsewhere. It was impossible to close the wide aperture without using excessive tension. Two deep lateral vaginal incisions were now made, and the damaged tissues were then comfortably approximated in the midline. The lateral incisions were left open, and apart from a rather free ooze of blood for twenty-four hours did not cause trouble. Three weeks later a tiny sinus was found communicating with the upper urethra: the edges were touched with a cautery needle, and healing thereafter was complete and final. The other patient had a fistula which had been present for years and which had already resisted operative treatment: her surgeons had told her that she was quite incurable. Operation in Sims's position was easy, and convalescence was quite uneventful. Two weeks later this patient was mentally and physically a new woman.

In dealing with cases of fistula I have always used Sims's semi-prone position when access has been difficult. Occasionally the original knee-chest position has been found to give increased benefit. Silver wire has been used exclusively, or, in the case of the modified operation, at least for the vaginal wall. In one or two cases silkworm-gut has been substituted, but the use of this substance necessitates tying knots high in the vagina, which is a clumsy procedure. If, however, silver wire is used the ends can be gently twisted under direct vision, even when they are far from the operator, and the required nicety of tension obtained with certainty. I have always insisted on having the patient nursed in the prone position, for by so doing there is, I believe, a lessened risk of urine forcing its way between the stitches of the repaired septum. It is my experience that if the patient has been accustomed to this position before operation any subsequent discomfort is tolerated with remarkable good will. A catheter with a plain end, but with an extra lateral eye, is left in the bladder, and is tied to a bridge of silkworm-gut crossing the vulva. It can thus be removed, cleaned of mucus and phosphatic deposit, and reinserted as often as may be necessary without disturbance to the patient. The urine is led to a receiving bottle standing at the side of the bed, and mild suction is constantly maintained by a Bunsen apparatus. The catheter and bottles require constant supervision, but the patient herself is usually quick to learn the necessary adjustments. One thing is certain: success in fistula work largely depends on the amount of supervision that the surgeon himself is able to give to post-operative treatment—above all, to ensure that free drainage is maintained from the bladder. The slipping of a badly

We know now that Sims's success with silver wire was also due to lessened sepsis. Compared with unsterilized thread it is "clean." Moreover, it probably liberates minute amounts of soluble salts which result in the suture lying in its own antiseptic channel. After using silver-wire sutures in a facial operation Sims writes: "Their removal was like that of a delicate ear-ring from the ear long used to wearing it."

applied catheter, a mucus plug, or a phosphate encrustation may easily turn success to failure.

Conclusion

The treatment of vesico-vaginal fistula has a fascination of its own. No branch of surgery calls for greater resource, never is patience so sorely tried, and never is success more dependent on the exercise of constant care both during operation and, even more perhaps, during the anxious days of convalescence. But never is reward greater. Nothing can equal the gratitude of the woman who, wearied from constant pain, depressed by an ever-growing sense of the humiliating nature of her infirmity, and desperate with the realization that her very presence is an offence to others, finds suddenly that she is restored to full health and able to resume a rightful place in the family—who finds, as it were, that life has been given anew and that she has again become a citizen of the world. To J. Marion Sims, more than to any man, is the honour for this transformation due. And if in these days a moment can be spared for sentimental reverie, look again, I beg, at the curious speculum and, gazing through the confused reflections from its bright curves, catch a fleeting glimpse of an old hut in Alabama and seven negro women who suffered, and endured, and had rich reward.

Two of the patients described were treated in the obstetric unit of University College Hospital, London; another in Hammersmith Hospital, L.C.C. (British Postgraduate Medical School). I gratefully acknowledge my thanks to Prof. F. J. Browne and to Prof. James Young for facilities given to me in these hospitals.

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THE REPAIR OF A VESICO-VAGINAL FISTULA BY A NEW TECHNIQUE

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The difficulties experienced in the operative repair of a vesico-vaginal fistula and the numerous resulting failures are offered as a sufficient excuse for the description of a new technique which holds promise of good results even though it has at present been used on only a single case, that case being completely successful.

Clinical History

The patient, an otherwise healthy woman aged 39, had had a hysterectomy for a non-malignant uterine disease nine months previously at another hospital and from that time was incontinent. She was referred to me with a request for treatment. A large centrally placed deficiency situated well above the level of the internal sphincter and easily admitting two fingers was found in the vesico-vaginal septum. The patient was continually wet when up and about, but in the recumbent position, as with many other cases of vesico-vaginal fistula, she was able to retain her urine and to pass it through the urethra. This is because the posterior wall of the vagina comes into contact with the opening in the anterior wall and thus acts as an obturator. The idea of the operation was suggested by this question, Why should not the posterior vaginal wall be made into a permanent obturator?

The Operation

The bladder was opened through a free midline suprapubic incision. The size of the fistula was confirmed as being somewhere between that of a florin and a half-crown. The margins of the opening were thin and would have offered poor material for the usual flap repair. They were completely epithelialized with healthy mucosa, the vaginal and bladder membranes meeting at the edge of the orifice. The vault of the vagina (the uterus having gone at a previous operation) was on a level with the upper lip of the fistula and thus there was not much fornix. In brief, the operation consisted in dividing the vagina across and using the top portion to close the fistula. The line of section was placed as low down that tube as easy working allowed (Fig. 1). It

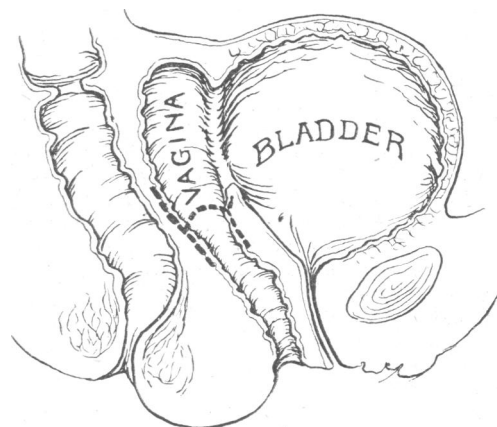


FIG. 1.—Diagram showing the fistula and the line of the flaps.

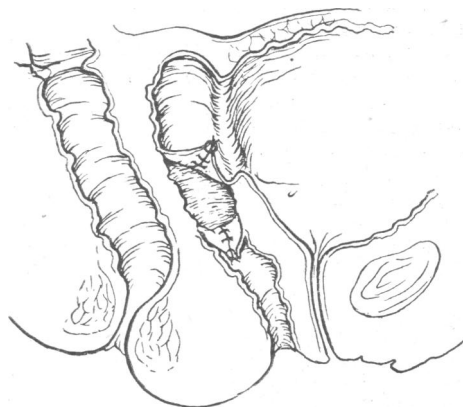


FIG. 2.—Flaps lifted and sutured. Note the dead space between the two pairs.

(N.B.—The vagina is a potential space, the anterior and posterior walls being in apposition. Figs. 1 and 2 therefore exaggerate the depth of the operative sacculus, which was in fact quite shallow.)

encircled the vagina at a point about 2 mm. below the lower lip of the fistula. The incision started on the posterior wall, which was steadied and elevated by a transfixion suture, and when it reached the anterior wall the margin of the fistula was drawn forward to trace the cut behind and below the edge of the opening. All coats of the vagina were cut through, and by blunt dissection the edges both above and below the incision were undercut and elevated for one-third of an inch or rather more (Fig. 2). Several sutures were now introduced to close the upper end of the lower part of the divided vagina and, having been tied, two of these stitches were taken on a pair of Spencer Wells forceps and were pushed through the suture line down towards the vulva, where they were received by an assistant and secured by another pair of forceps, thus inverting the flaps. A new vault for the vagina at a lower level was thus made.

A drainage tube should at this stage have been pushed through the suture line towards the vulva and made to sit with its upper end above the new vaginal vault. In actual fact